

FIG. 1

IMAGE PROCESSING SYSTEM 2

NETWORK 4

CLIENT TERMINAL 12a

CLIENT TERMINAL 12b

SCANNER 14

DIGITAL CAMERA 16

PRINTER 20

RECORD MEDIUM 122

FIG. 2

200 CONTROLLER

210 CONTROLLER MAIN UNIT

214 MEMORY

220 COMMUNICATION UNIT

230 PRINTER MAIN UNIT

240 STORAGE UNIT

242 RECORD MEDIUM

250 UI UNIT

PRINTER 20

FIG. 3

PRINTER DRIVER 5

IMAGE FORMATION PROGRAM 6

500 IMAGE DATA ACQUISITION

510 FILTERING

520 REVERSIBLE COMPRESSION

530 COMMUNICATION IF

610 COMMUNICATION IF

620 IMAGE GENERATION

(SCALE-UP, SCALE-DOWN, ROTATION)

622 IMAGE DECOMPRESSION

624 REVERSIBLE COMPRESSION

630 IMAGE STORAGE

640 IMAGE PROCESSING

(COLOR CONVERSION, TRC)

650 PRINT

A. TO PRINT ENGINE

FIG. 4

FILTERING SECTION 510

512a FIRST PREDICTION

512b SECOND PREDICTION

514 PIXEL VALUE CHANGE PROCESSING

516 ERROR DISTRIBUTION PROCESSING

522a FIRST PREDICTION

522b SECOND PREDICTION

524 PREDICTION ERROR CALCULATION

526 SELECTION

528 RUN COUNT

529 CODING

FIG. 5

PRINTER DRIVER 5

IMAGE FORMATION PROGRAM 6

S100 ACQUIRE IMAGE DATA

S110 PERFORM FILTERING

S120 PERFORM REVERSIBLE COMPRESSION PROCESSING

S130 TRANSMIT IMAGE DATA

S140 RECEIVE IMAGE DATA

S150 EDIT IMAGE DATA

(DECOMPRESS AND COMPRESS)

S160 EDIT COMPLETE?

S170 CORRECT IMAGE DATA

(DECOMPRESS AND COMPRESS)

S180 PRINT IMAGE

(DECOMPRESS)

S10

FIG. 6

FILTERING (S110)

S112 PREDICT PIXEL VALUE

S114 WITHIN PREDETERMINED VALUE?

S116 CHANGE PIXEL VALUE

S118 DISTRIBUTE ERROR

REVERSIBLE COMPRESSION PROCESSING (S120)

S122 PREDICT PIXEL VALUE

S123 DOES FIRST PREDICTION SECTION MAKE RIGHT PREDICTION?

S124 DOES SECOND PREDICTION SECTION MAKE RIGHT PREDICTION?

S125 SELECT CORRESPONDING PREDICTION SECTION ID

S126 SELECT PREDICTION ERROR

S127 CODE

S128 IS PROCESSING COMPLETE FOR ALL PIXELS?

FIG. 7

PRINTER DRIVER 52

IMAGE FORMATION PROGRAM 62

500 IMAGE DATA ACQUISITION

510 FILTERING

520 REVERSIBLE COMPRESSION

530 COMMUNICATION IF

540 PARAMETER GENERATION

610 COMMUNICATION IF

620 IMAGE GENERATION

622 IMAGE DECOMPRESSION

624 REVERSIBLE COMPRESSION

630 IMAGE STORAGE

640 IMAGE PROCESSING

650 PRINT

660 BAND MONITOR

FIG. 8

PRINTER DRIVER 52

IMAGE FORMATION PROGRAM 62

S100 ACQUIRE IMAGE DATA

S200 ACQUIRE BAND INFORMATION

S210 TRANSMIT BAND INFORMATION

S220 RECEIVE BAND INFORMATION

S230 GENERATE PARAMETER

S110 PERFORM FILTERING

S120 PERFORM REVERSIBLE COMPRESSION PROCESSING

S130 TRANSMIT IMAGE DATA

S140 RECEIVE IMAGE DATA

S150 EDIT IMAGE DATA

(DECOMPRESS AND COMPRESS)

S160 EDIT COMPLETE?

S170 CORRECT IMAGE DATA

(DECOMPRESS AND COMPRESS)

S180 PRINT IMAGE

(DECOMPRESS)

S20

FIG. 9

PRINTER DRIVER 54

IMAGE FORMATION PROGRAM 64

500 IMAGE DATA ACQUISITION

510 FILTERING

520 REVERSIBLE COMPRESSION

530 COMMUNICATION IF

610 COMMUNICATION IF

620 IMAGE GENERATION

622 IMAGE DECOMPRESSION

624 REVERSIBLE COMPRESSION

626 FILTERING

630 IMAGE STORAGE

640 IMAGE PROCESSING

650 PRINT

660 BAND MONITOR

670 PARAMETER GENERATION

FIG. 10

S152 DECOMPRESS IMAGE DATA

S154 EDIT IMAGE DATA

S155 GENERATE FILTER PARAMETER

S156 PARAMETER CHANGED OR NEW PIXEL VALUE GENERATED?

S158 PERFORM FILTERING

S159 COMPRESS IMAGE DATA

IMAGE DATA EDIT PROCESSING (S150)

FIG. 11

FILTERING SECTION 510

512a FIRST PREDICTION

512b SECOND PREDICTION

514 PIXEL VALUE CHANGE PROCESSING

516 ERROR DISTRIBUTION PROCESSING

518 CHANGE ALLOWANCE SETTING

519 MTF CHARACTERISTIC DB

FIG. 13

PRINTER DRIVER 56

IMAGE FORMATION PROGRAM 66

500 IMAGE DATA ACQUISITION

530 COMMUNICATION IF

610 COMMUNICATION IF

620 IMAGE GENERATION

622 IMAGE DECOMPRESSION

624 REVERSIBLE COMPRESSION

626 FILTERING

630 IMAGE STORAGE

640 IMAGE PROCESSING

650 PRINT

FIG. 14

PRINTER DRIVER 57

IMAGE FORMATION PROGRAM 67

500 IMAGE DATA ACQUISITION

510 FILTERING

530 COMMUNICATION IF

610 COMMUNICATION IF

620 IMAGE GENERATION

622 IMAGE DECOMPRESSION

624 REVERSIBLE COMPRESSION

630 IMAGE STORAGE

640 IMAGE PROCESSING

650 PRINT

FIG. 15

PRINTER DRIVER 58

IMAGE FORMATION PROGRAM 68

500 IMAGE DATA ACQUISITION

510 FILTERING

520 REVERSIBLE COMPRESSION

530 COMMUNICATION IF

610 COMMUNICATION IF

620 IMAGE GENERATION

622 IMAGE DECOMPRESSION

624 REVERSIBLE COMPRESSION

626 FILTERING

630 IMAGE STORAGE

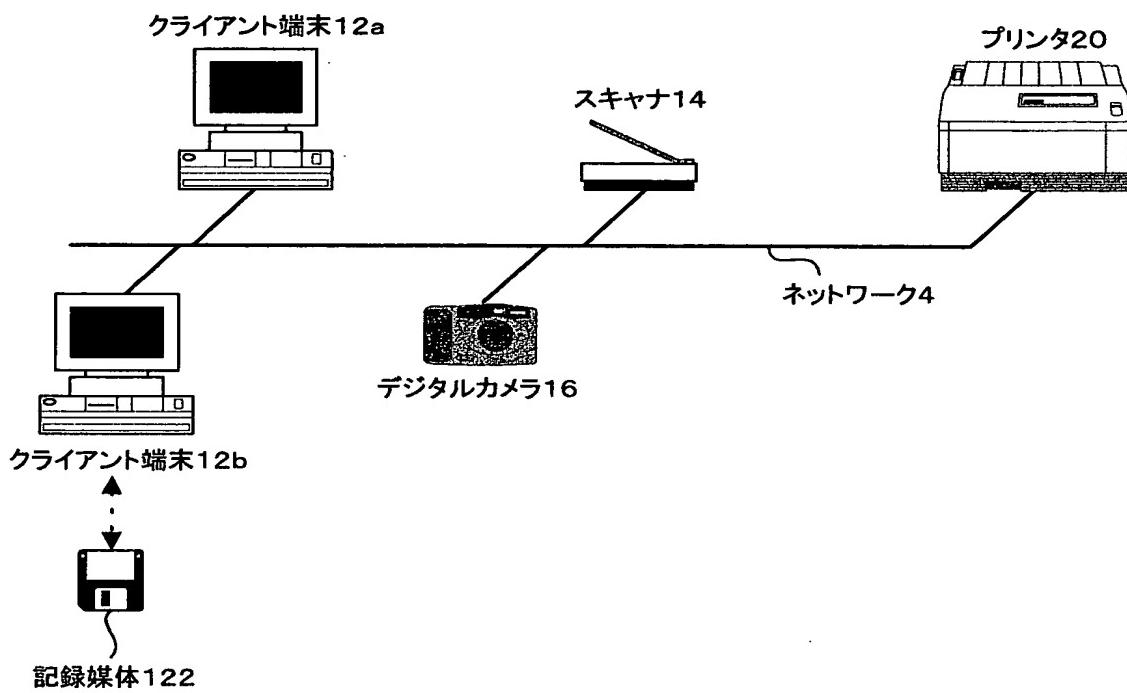
640 IMAGE PROCESSING

650 PRINT

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【図1】

FIG. 1



画像処理システム2

【図2】

FIG. 2

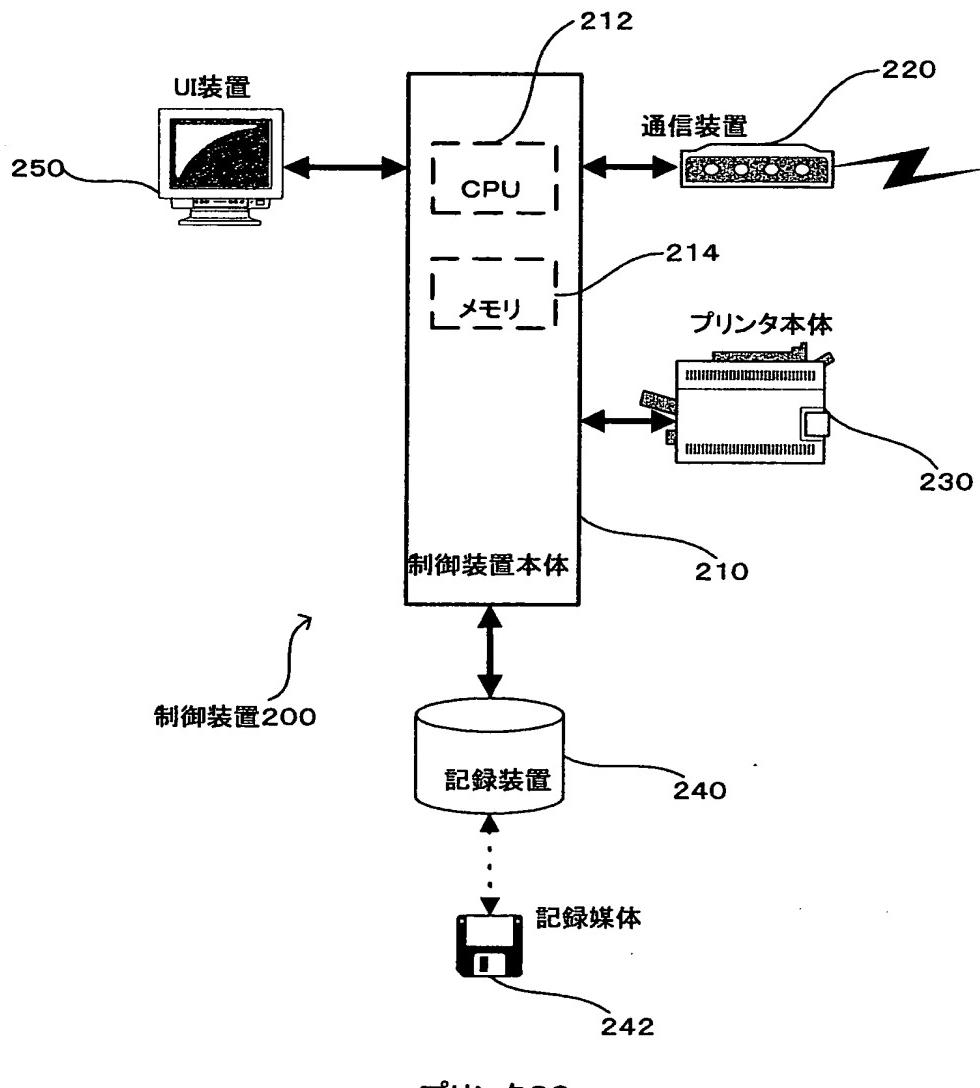
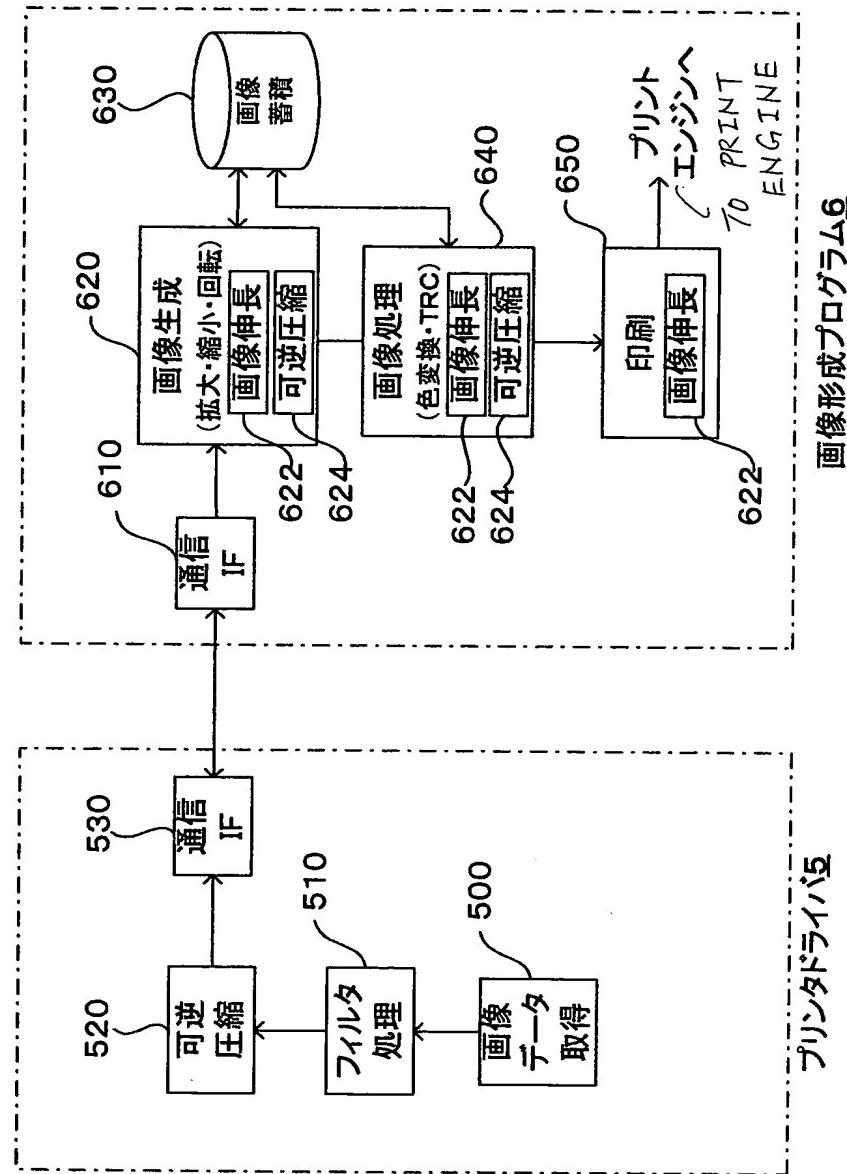


図3

FIG. 3

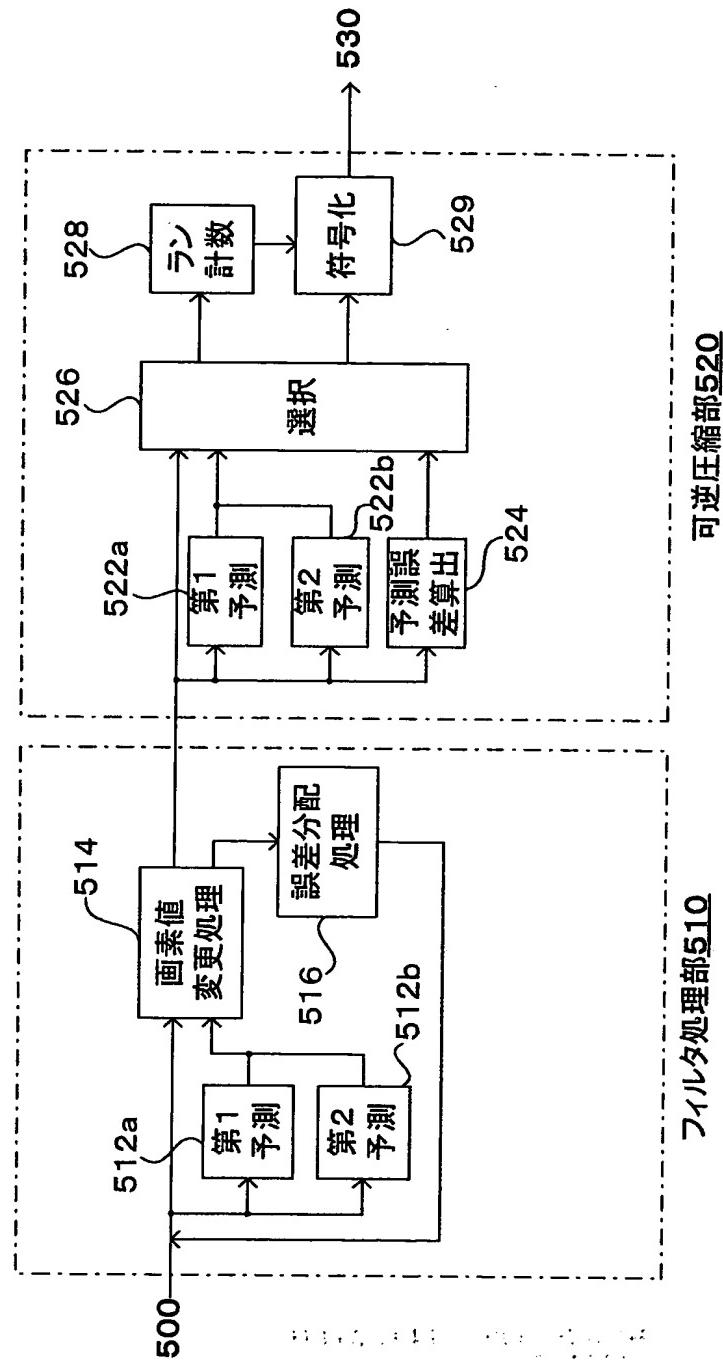


プリンタドライバ / 5

画像形成プログラム6

FIG. 4

図4



フィルタ処理部510

可逆圧縮部520

【図5】

FIG. 5

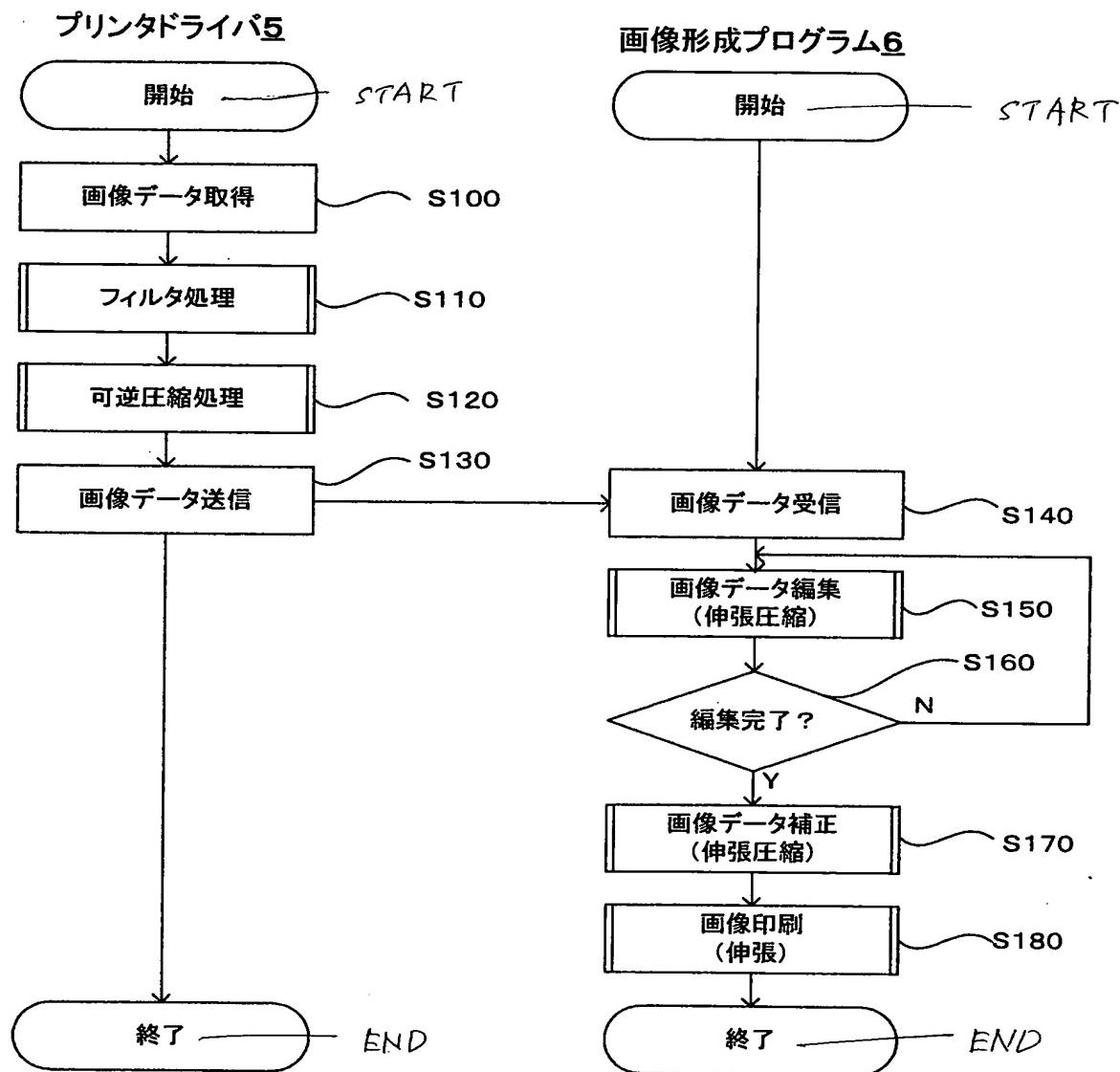
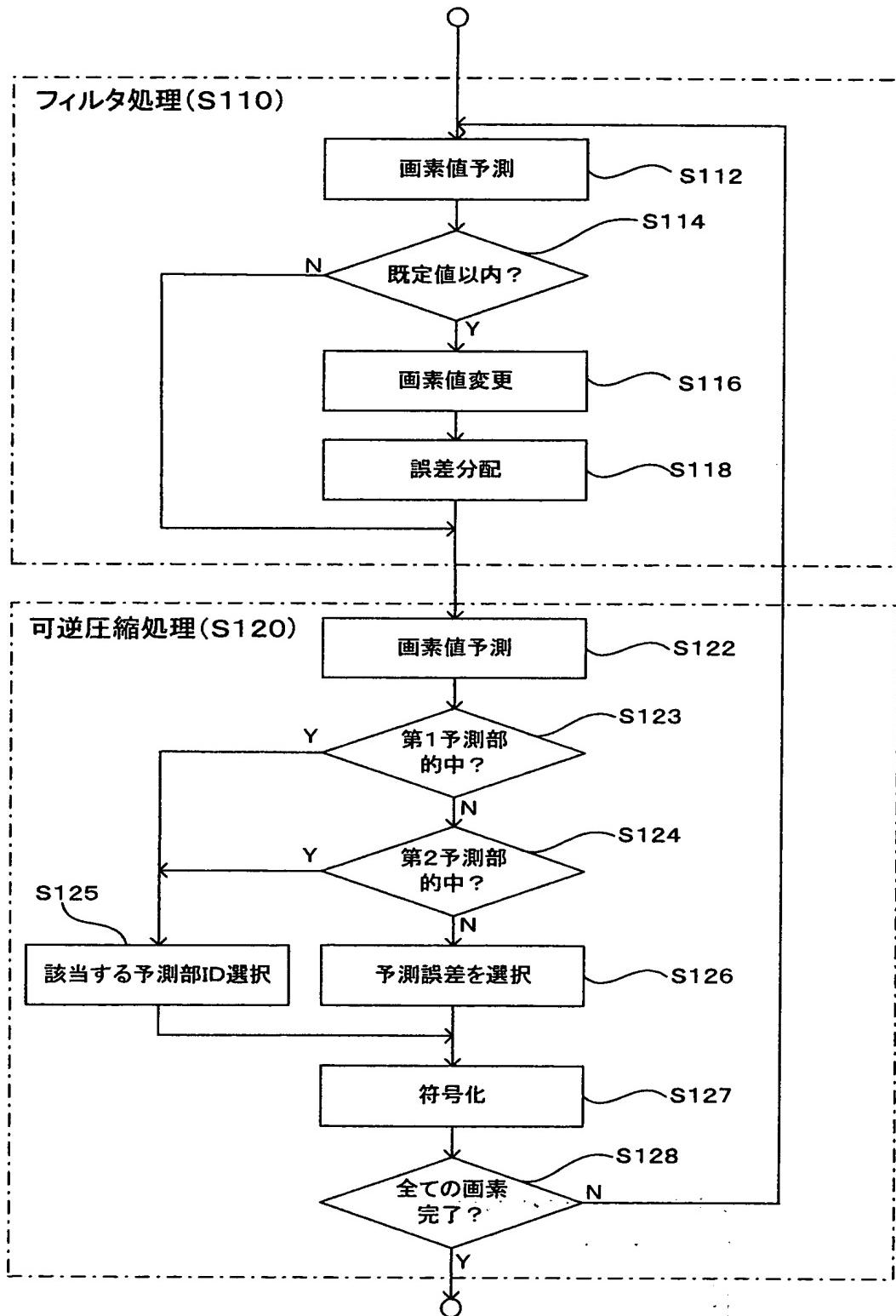
S10

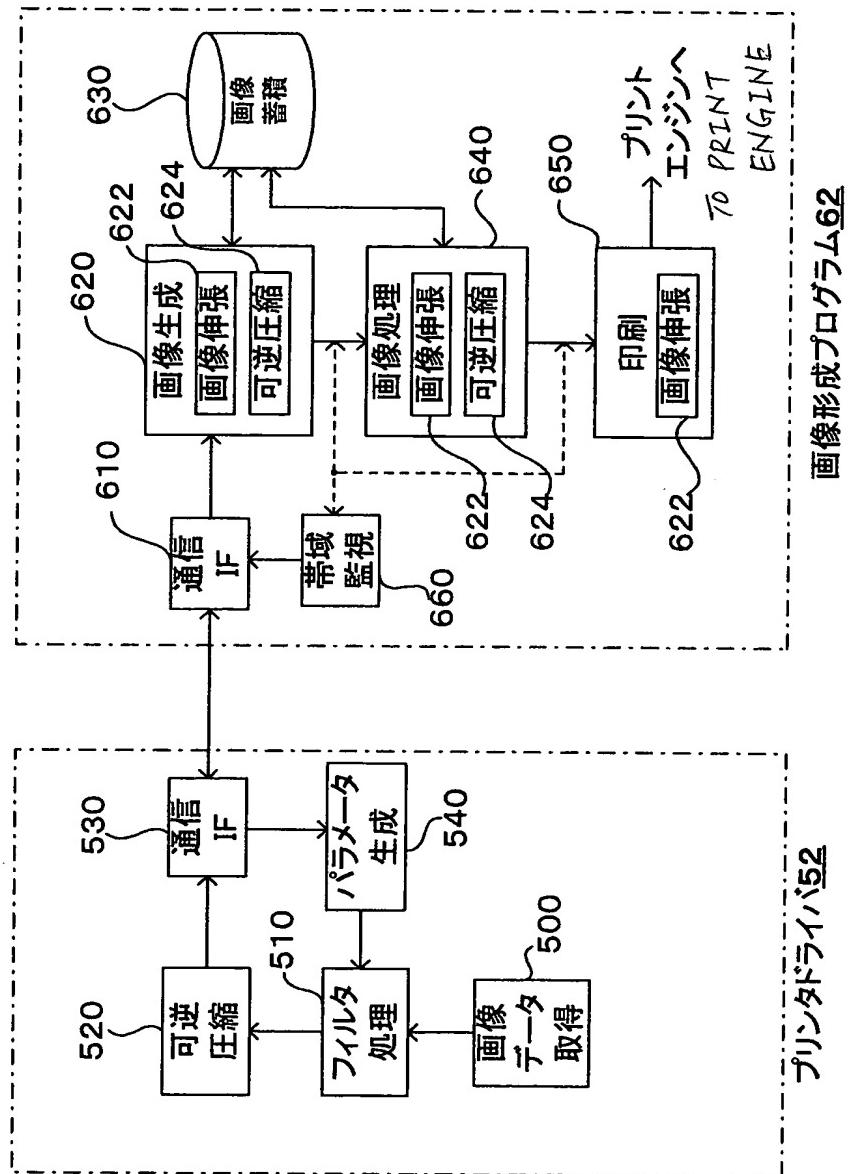
FIG. 6

【図6】



【図7】

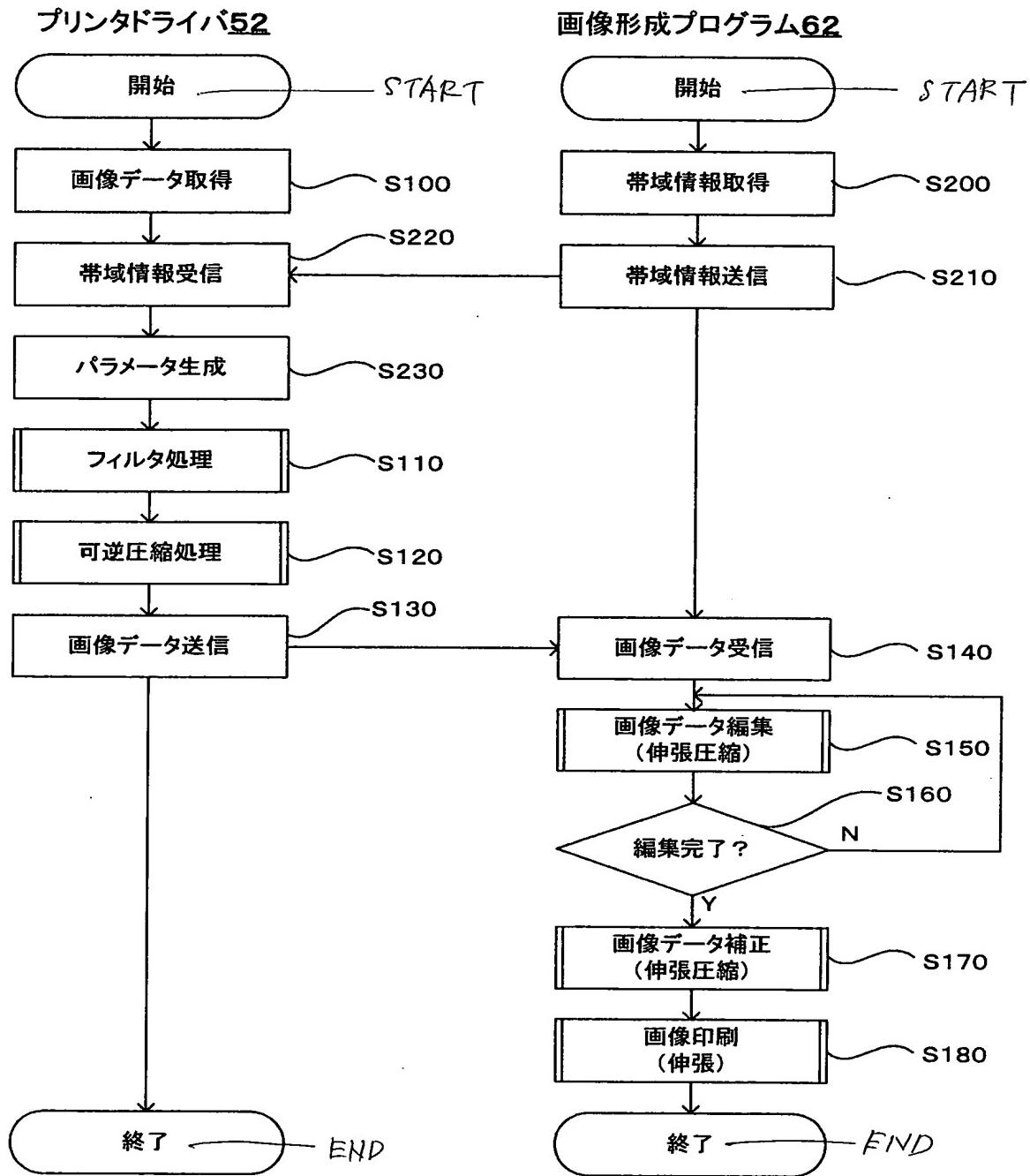
FIG. 7



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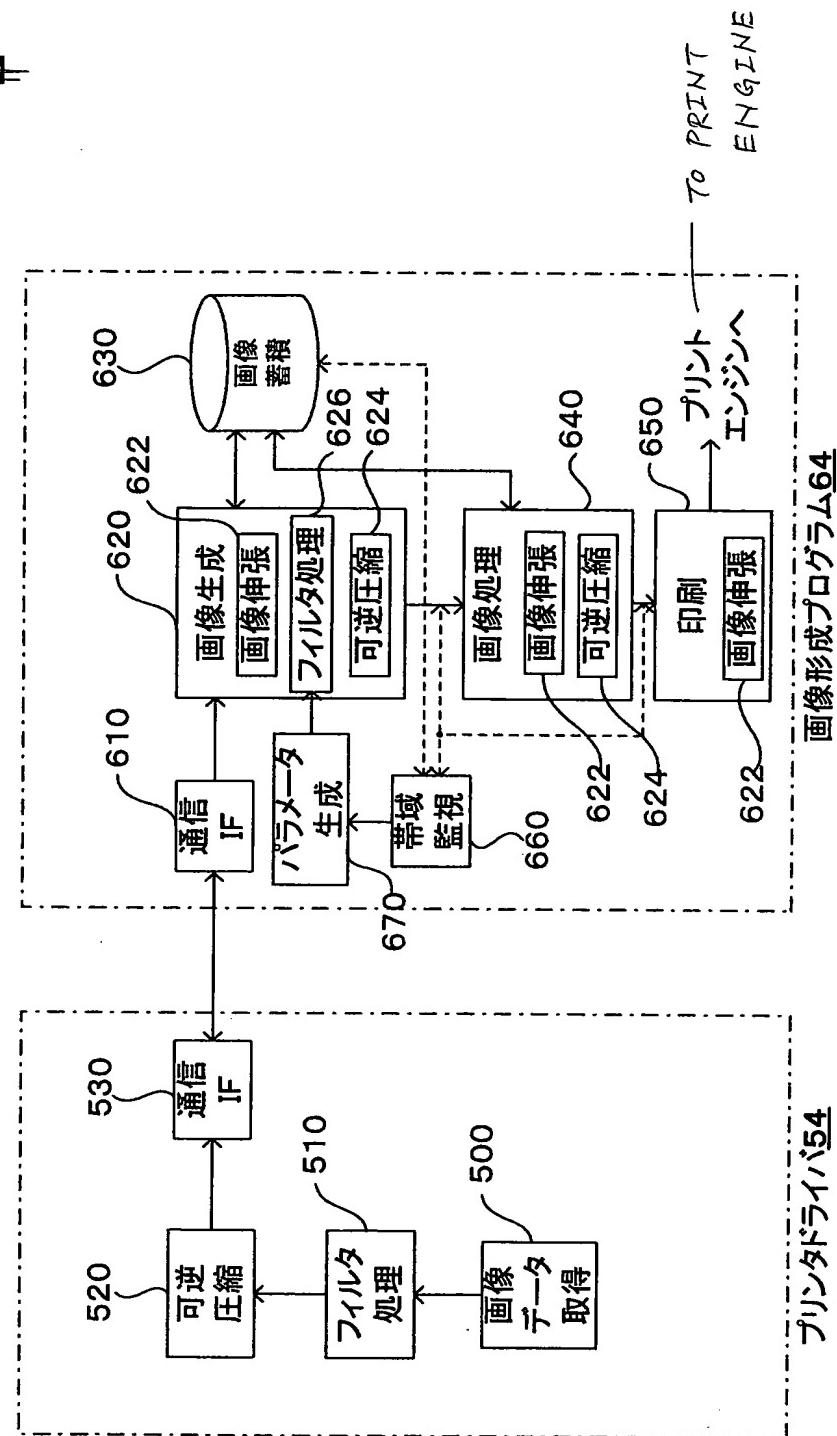
FIG. 8

【図8】

S20

[図9]

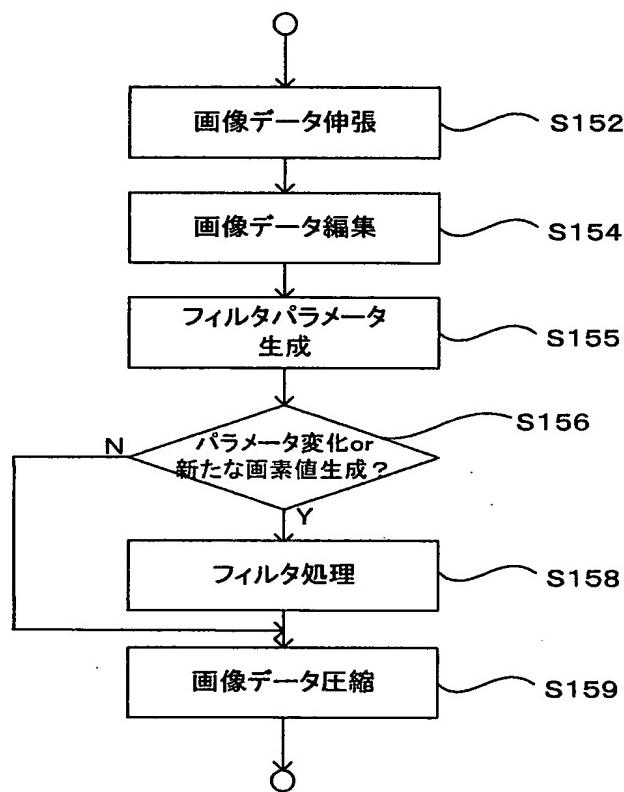
FIG. 9



画像形成プログラム 64
プリンタドライバ 54

【図10】

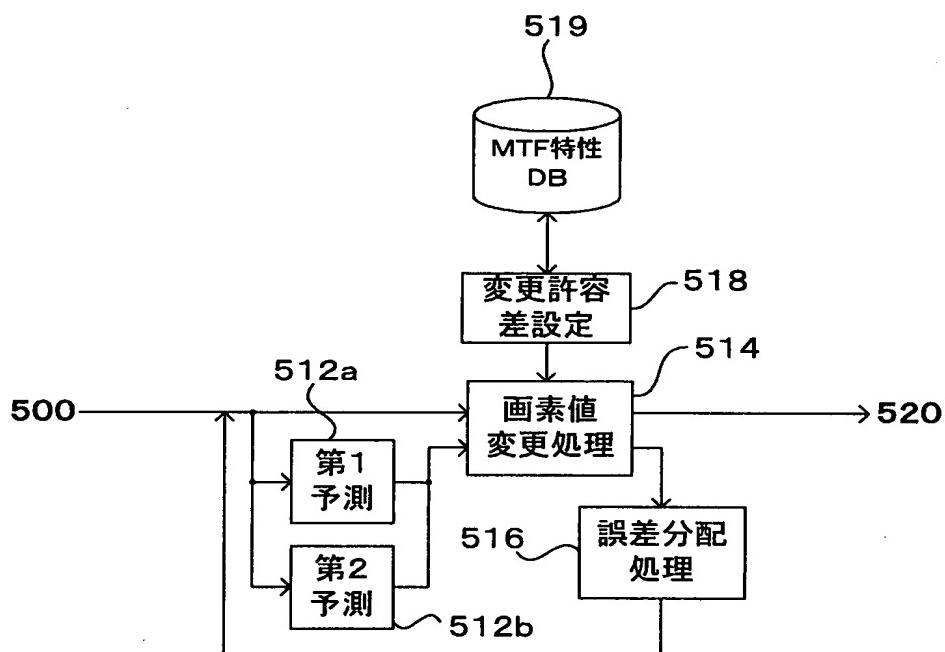
FIG. 10



画像データ編集処理(S150)

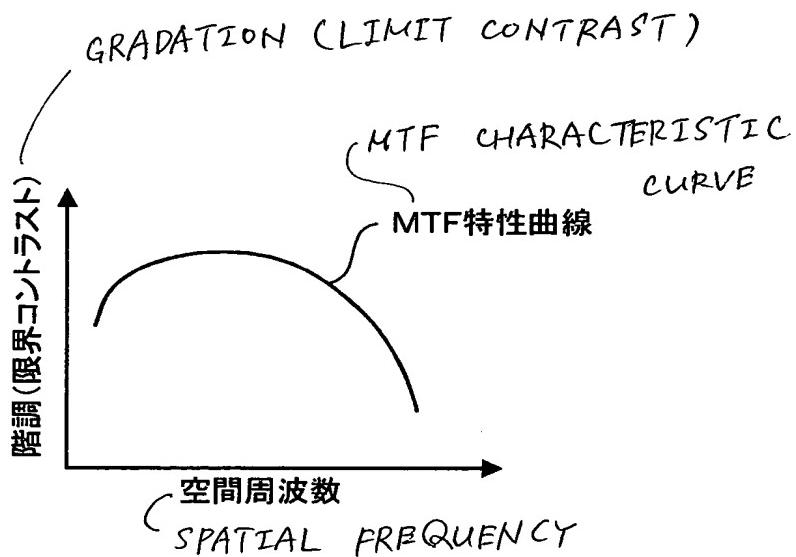
{図11}

FIG. 11

フィルタ処理部510

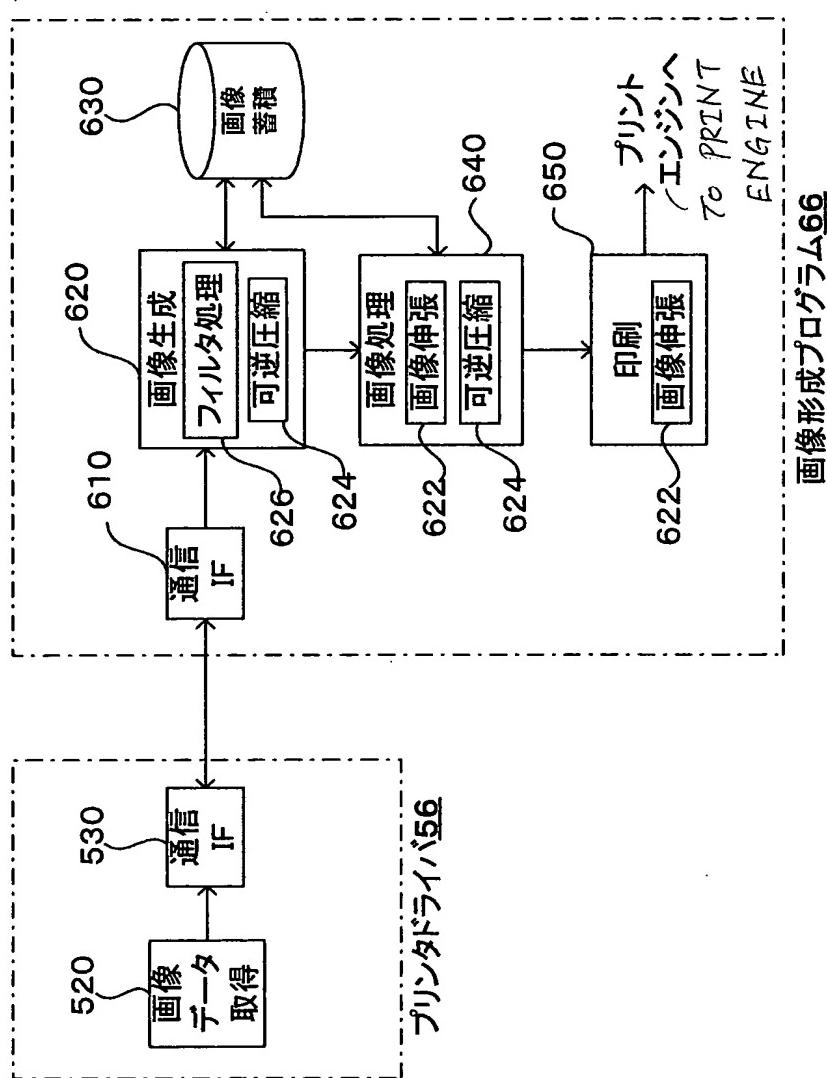
[図12]

FIG. 12



【図13】

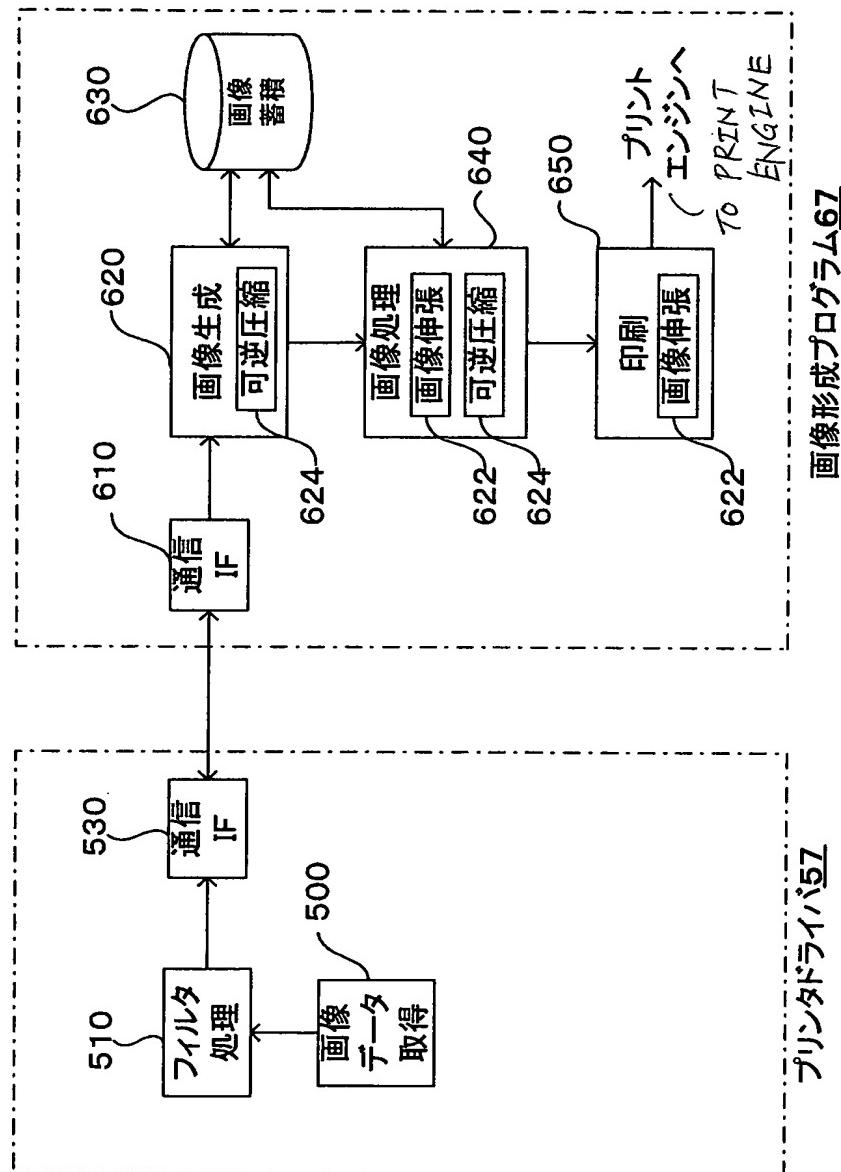
FIG. 13



画像形成プログラム 66

【図14】

FIG. 14



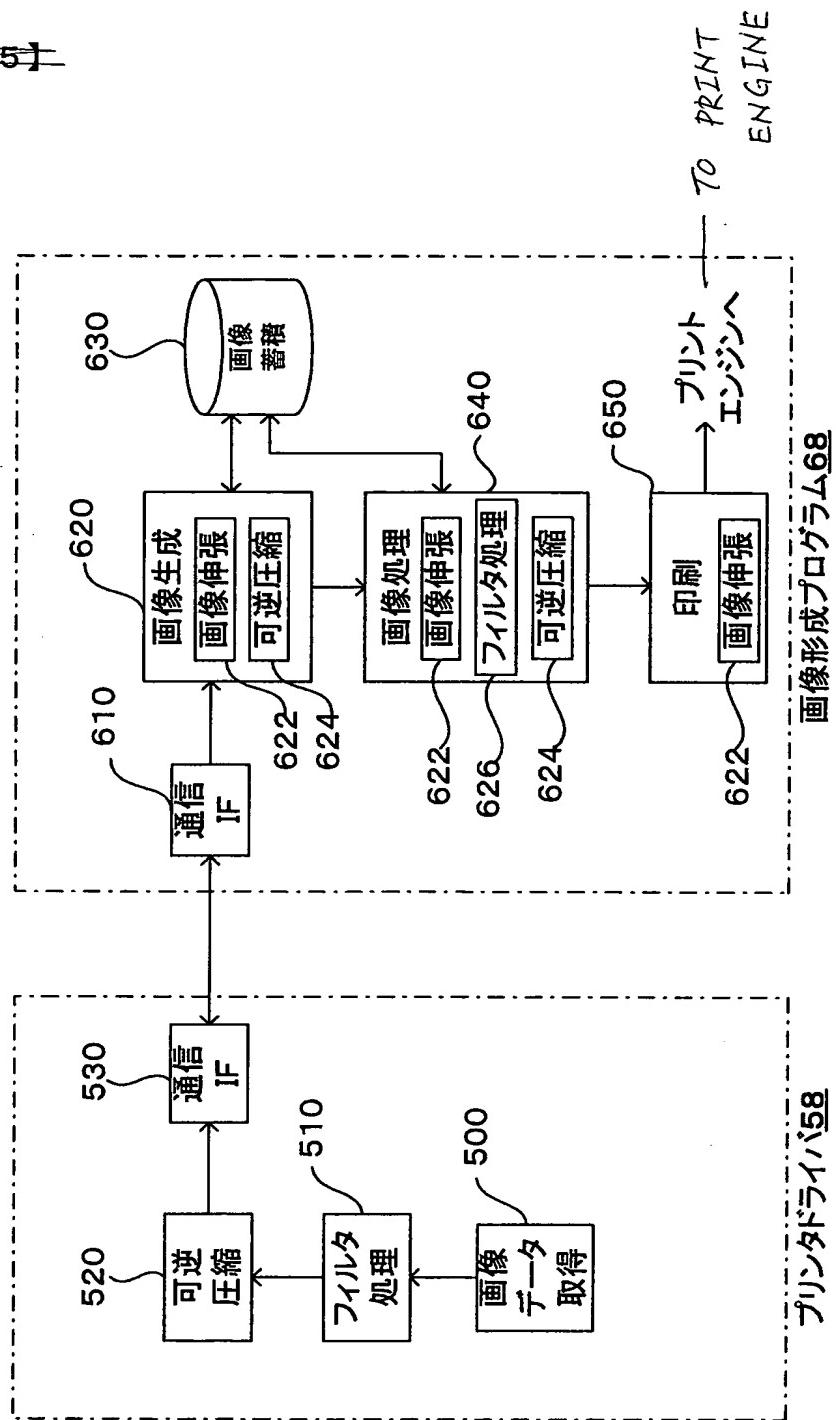
プリンタドライバ57

画像形成プログラム67

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【図15】

FIG. 15



プリンタドライバ58

画像形成プログラム68